Dr. Kaigham J. Gabriel
Deputy Director
Defense Advanced Research Projects Agency

Dr. Kaigham (Ken) J. Gabriel was appointed deputy director of the Defense Advanced Research Projects Agency (DARPA) in July of 2009. Founded in 1958 as a response to the Soviet Union's launch of Sputnik, DARPA's mission is to prevent and create strategic surprise. From its founding more than 50 years ago to current day, this mission implies one imperative for the Agency: radical innovation for national security. Today, DARPA is the principal agency within the Department of Defense for research, development, and demonstration of high-risk, high-payoff projects for the current and future combat force.

Prior to DARPA, Dr. Gabriel was the Founder, Chairman and Chief Technical Officer of Akustica, a semiconductor company commercializing Micro Electro Mechanical Systems (MEMS) sensors for consumer electronics products. Akustica, based in the United States with a global supply chain and customer base, pioneered the use of digital silicon microphones and shipped more than 5 million units to the PC/notebook industry prior to being acquired in 2009. Since founding the company in late 2001, his responsibilities focused on managing continued technology innovation, product development, manufacturing, and business execution.

In 1997, Dr. Gabriel was jointly appointed Professor of Electrical & Computer Engineering and Robotics at Carnegie Mellon University. From 1992 to 1997, Dr. Gabriel was at the Defense Advanced Research Projects Agency. In 1992, he was recruited to start the Agency's MEMS program and grew the effort to more than $80 million a year with more than 70 projects. He was promoted to Director of the Electronics Technology Office (1996-1997), where he was responsible for nearly $450 million annually in electronics technology programs including advanced lithography, electronics packaging, MEMS, optoelectronics, millimeter and microwave integrated circuits, and high-definition displays.

Prior to his Government service, Dr. Gabriel was at AT&T Bell Labs in the Robotic Systems Research Department, where he pioneered the field of MEMS and started the silicon MEMS effort, leading a group of researchers in exploring and developing IC-based MEMS for applications in photonic and network systems. During a sabbatical year from Bell Labs, Dr. Gabriel was a Visiting Associate Professor at the Institute of Industrial Science, University of Tokyo, where he led joint projects at IBM Japan Research, Toyota Central Research Laboratories, and Ricoh Research Park. After leaving Bell Laboratories in 1991, he spent a year as a visiting scientist at the Naval Research Laboratory transferring micromechanics processing technology to the Nanoelectronics Processing Facility.

Widely regarded as the architect of the MEMS industry, Dr. Gabriel was named a Technology Pioneer by the World Economic Forum at Davos in 2003, one of 40 selected worldwide. He is the co-founding Executive Director of the MEMS Industry Group, the principal trade organization representing the MEMS industry globally.

Dr. Gabriel counts among his honors the Carlton Tucker Prize for Excellence in Teaching from the Massachusetts Institute of Technology; appointment to the Senior Executive Service; and co-chair of the Task Force on Defense Technology Strategy and Management for the Defense Science Board 1999 Summer Study on "21st Century Defense Technology Strategies."

An international lecturer on innovation and technology development, Dr. Gabriel holds an S.M. and a Ph.D. in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology.